

Lead Poisoning in Baltimore



GOAL:

**Eliminate childhood lead poisoning
in the City of Baltimore by 2010**

THE IMPACT OF LEAD ON CHILDREN

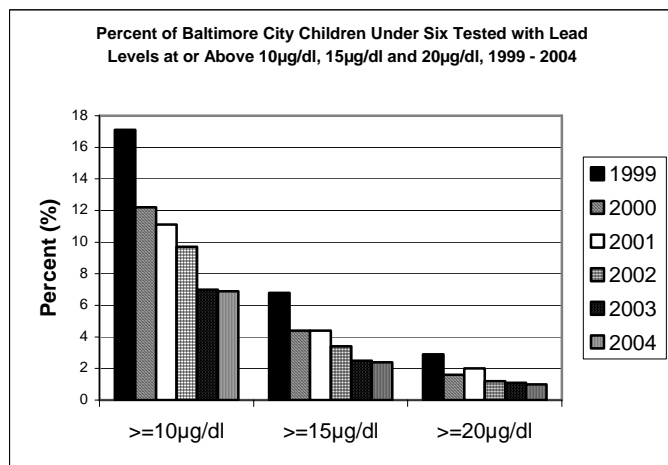
Exposure to large doses of lead can cause encephalopathy and death. Chronic low-level lead exposure is associated with decreased IQ, learning disabilities, school failure, and delinquency. There is no known safe level of lead exposure in children.¹

LEAD POISONING DECREASES IN BALTIMORE

The rate of childhood lead poisoning has decreased substantially in Baltimore City in recent years.

From 1999 to 2004, the percentage of children under six years tested with venous lead levels at or above 20 µg/dl declined by 66%, the percentage at or above 15 µg/dl declined by 65%, and the percentage at or above 10 µg/dl declined by 60%. (Figure 1)²

Figure 1.



Source: Maryland Department of the Environment

An alternative approach to measuring lead poisoning is to count both venous and capillary blood tests. This approach yields a similar picture in Baltimore City from 1999 to 2004.³

LEAD ABATEMENTS

Dust from lead paint in homes and apartments is the most common cause of lead poisoning in children. The Baltimore City Health Department has worked to remove lead paint hazards in high-risk homes throughout the city.

During the last five years, the Baltimore City Health Department brought about abatements of lead hazards through legal enforcement as well as grants and loans to improve housing of low- and moderate-income residents.

Abatement of lead hazards includes:

- Replacing windows and other deteriorated leaded building components;
- Eliminating loose paint and friction surfaces from doors, floors, walls, porches and siding;
- Repairing roofs and plumbing to protect the integrity of paint surfaces; and
- Performing specialized interior cleaning.

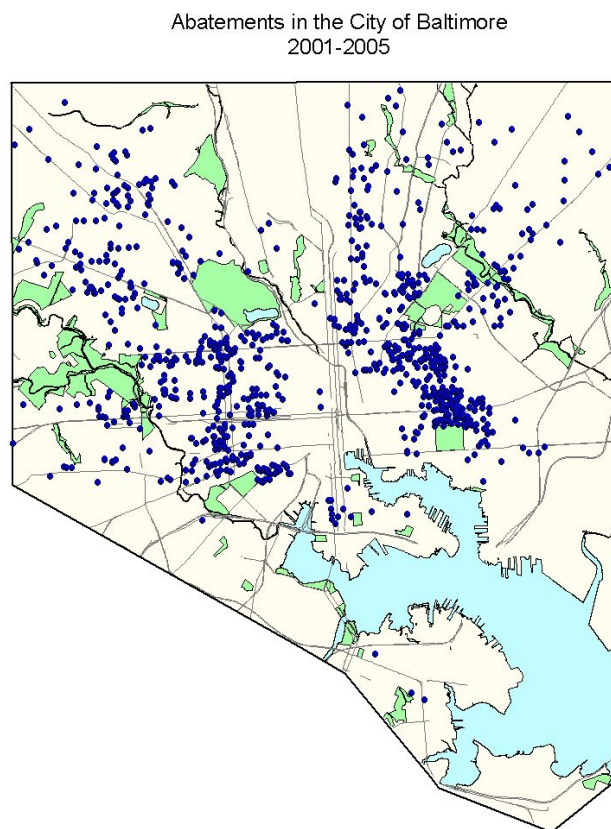
Legal enforcement is a major component of the City of Baltimore's strategy to eliminate lead poisoning. Legal enforcement uses citations and prosecution of court cases to obtain lead hazard abatements. Legal enforcement was responsible for the abatement of 587 homes between 2001 and 2005.

The Baltimore City Health Department and Healthy Start, Inc. offer grants and loans in order to abate lead hazards in the houses of low- and moderate-income homeowners. Technical expertise is also provided to a wide variety of residents and community groups.

The Health Department and Healthy Start ensured the removal of lead hazards from 898 properties since 2001. 37% of the abated properties were located in the Empowerment Zone, the Healthy Start zone (the area in Baltimore with the highest infant mortality rate), or in locations in which lead poisonings occurred.

In sum, enforcement, grants, and loans were responsible for 1,350 abatements between 2001 and 2005.⁴

Figure 2. Each dot indicates the location of a lead hazard abatement

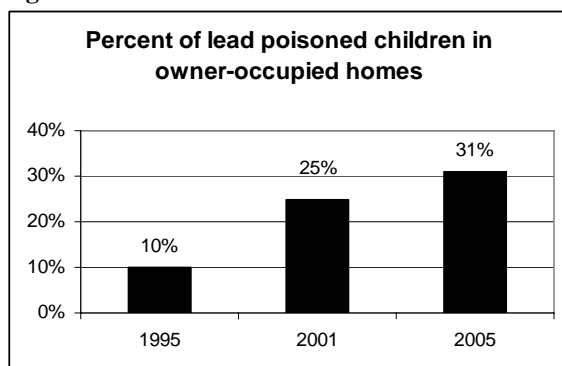


RISE IN PERCENT OF CASES OF LEAD POISONING IN OWNER-OCCUPIED HOMES

Although more than two-thirds (69%) of the cases of lead poisoning occurred in rental properties in 2005, this represents a decline in the proportion of cases occurring in rental properties. The rate of poisoning in owner-occupied units has climbed steadily during the last decade (Figure 3).

Addressing the needs of lead poisoned children who live in owner occupied homes is increasingly important.

Figure 3.



ACHIEVING THE GOAL OF ELIMINATING LEAD POISONING CASES BY 2010

Although the rate of poisonings continues to decline, the rate of the decline has slowed. The Health Department plans additional strategies, including a focus on prevention, to meet the 2010 goal of no children with lead exposure at or above 10 µg/dl.⁵

Notes

¹ American Academy of Pediatrics, *Lead Exposure in Children: Prevention, Detection, and Management*, Pediatrics, 1036-1046 (October 2005).

² Data source: Maryland Department of the Environment, Lead Poisoning Prevention Program, Childhood Blood Lead Surveillance in Maryland, *Annual Report: 1999 – 2004*, Supplement #2.. In March 2006, the Baltimore City Health Department announced a new initiative to collaborate with the Lead Poisoning Prevention Program to provide consistent data on lead poisoning in the city. This snapshot replaces the snapshot released on January 31, 2006.

³ The following tables present: (1) venous tests; (2) venous tests and capillary tests in the absence of a venous test. Absolute numbers below do not represent all children in Baltimore City with lead poisoning, as not all children are tested each year. Source: Maryland Department of the Environment.

Table 1. Number and Percentage of Children under Six in Baltimore tested with Lead Exposure greater or equal to 10µg/dl, 15µg/dl and 20 µg/dl, 1999-2004. Venous blood tests.

Year	>=10µg/dl		>=15µg/dl		>=20µg/dl	
	#	%	#	%	#	%
1999	2590	17.1	1032	6.8	446	2.9
2000	1980	12.2	707	4.4	266	1.6
2001	1284	11.1	505	4.4	230	2.0
2002	1321	9.7	467	3.4	183	1.2
2003	1050	7.0	369	2.5	160	1.1
2004	1036	6.9	364	2.4	147	1.0

Table 2. Number and Percentage of Children under Six in Baltimore tested with Lead Exposure greater or equal to 10µg/dl, 15µg/dl and 20 µg/dl, 1999-2004. Venous blood tests or highest capillary test in the absence of a venous test.

Year	>=10µg/dl		>=15µg/dl		>=20µg/dl	
	#	%	#	%	#	%
1999	2902	16.7	1124	6.5	470	2.7
2000	2189	12.1	775	4.3	295	1.6
2001	2027	9.5	666	3.1	249	1.2
2002	1558	9.4	519	3.1	206	1.1
2003	1166	6.4	400	2.2	170	0.9
2004	1183	6.2	393	2.1	152	0.8

⁴ The number of total abatements is less than the sum of properties abated through enforcement and through grants and loans. This is because of overlap between the two efforts.